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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,639	09/28/2001	Douglas E. LeCrone	E30-052 (00-198)	4987

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EXAMINER

HUYNH, KIM NGOC

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

174

Office Action Summary	Applicant(s)	
	LECRONE ET AL	
	Applicant No.	Art Unit
	09/966,639	2182
	Examiner	
	Kim Huynh	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 1 and 10 are misdescriptive because the claims recite that the determination of operating validity is done during normal operation and also during an address switch. It is unclear what applicant intends by this limitation. What does applicant defines as "normal operation"? Is this "normal operation" different from the "address switch" operation? Are the determining and verifying of operating validity the same or different and if they are different, how are they different from each other.

The "operating validity" is also vague since it is unclear what applicant intend to be the operating parameters to be validated encompasses by the claimed invention.

b. Claim 10 is an apparatus claim, however, the last line of the preamble recites "said method comprising" which makes the claim indefinite.

Correction/clarification required.

3. The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Beardsley et al. (US 56,304,980).

Claims 1 and 10, Beardsley discloses a method and apparatus for enabling the mirroring of data in a first and second groups of pluralities of logical devices (104-107 or 206 and 216) between a first and second channel in normal operation wherein each having an identifying control block (using same serial volume and SASD addresses in primary and secondary, see background); wherein during normal operation, the operating validity of the first and second groups of logical devices is determined (checking to see if the secondary storage controller supports the reserve features done routinely done, i.e. during normal operation, col. 15, ll. 4-31 or checking all applications running on the processor for planned maintenance action and load balancing, col. 16, ll. 19-45) and initiation of the address switch is done by verifying the operating validity and exchanging the information in each control block associated with the first and second groups of logical devices with each other and subsequent I/O requests are directed to

the second group of logical devices, peer to peer dynamic address switching PDAS, (Fig. 8, col. 16, ll. 32-68).

Claims 2-3 and 11-12, Beardsley discloses the determination of operating validity occurs asynchronously and independently of exchange of control block of information and is made periodically (reserve determination and checking is done asynchronously and independent of swapping operation as per the discussion in col. 15, ll. 4-31 and col. 16, ll. 19-45).

Claims 4-5 and 13-14, Beardsley discloses the processor and logical devices can operate with different configurations (reserve state, col. 5, ll. 49-59) and operating modes (mirror, maintenance and load balancing) and determination responds to a change in the configuration or operating modes of the first group of logical devices.

Claims 6-7 and 15-16, Beardsley discloses the determination includes validity for each of the logical devices in the first group and its corresponding logical device in the second group (col. 20, ll. 59-66) and data structure include validity flag set by the validity determination (col. 14, ll. 20-44 and col. 20, l. 66 through col. 21, l. 13).

Claims 8-9 and 17-18, Beardsley discloses the exchange of information occurs while all logical device have been blocked for responding to any I/O request, and being released after all the exchanges are made whereby the redirection of I/O requests occurs essentially simultaneously (Fig. 10, interrupt to hosts 1020 and resumes I/O from hosts 1075-1080).

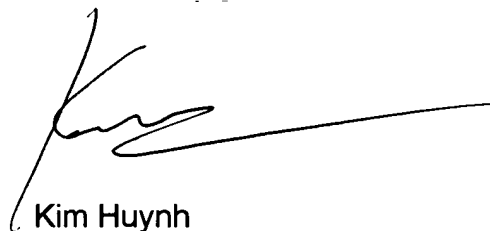
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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kern et al. (US 6,484,187) and Burton et al. (US 6,526,419) disclose various apparatus for mirroring data between primary and secondary DASD).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703) 308-1678.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to be 'Kim Huynh', with a long horizontal stroke extending to the right.

Kim Huynh
Primary Examiner
Art Unit 2182

KH
December 23, 2003